

NAVAL WAR COLLEGE  
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**RESTORING THE HEALTH OF THE MERCHANT MARINE:  
A PREREQUISITE FOR OPERATIONAL SUSTAINMENT**

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the Requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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In time of national crisis, the operational commander will need force sustainment. That sustainment will rely on ocean-going cargo ships. The first wave of those ships is rightly placed in government ownership, but the bulk of the materiel needed in a crisis must be moved on U.S. merchant ships. The United States will not fight its next major war against a cooperative enemy, nor will we fight it with virtually the whole world on our side. Our potential future adversaries have learned well the lessons taught by the Gulf War; they will not repeat Saddam Hussein's mistakes. We must solve the merchant marine problem soon, or we will not be able to sustain the fight on our own in a major war.

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## **Restoring the Health of the Merchant Marine: A Prerequisite for Operational Sustainment**

*It is necessary for the national defense and the development of its foreign and domestic commerce that the United States shall have a merchant marine (a) sufficient to carry its domestic water-borne commerce and a substantial portion of the water-borne export and import foreign commerce of the United States and to provide shipping service essential for maintaining the flow of such domestic and foreign water-borne commerce at all times; (b) capable of serving as a naval and military auxiliary in times of war or national emergency; (c) owned and operated under the U.S. flag by citizens of the United States insofar as may be practicable; (d) composed of the best-equipped, safest, and most suitable types of vessels, constructed in the United States and manned with a trained and efficient citizen personnel, and (e) supplemented by efficient facilities for ship building and ship repair. It is hereby declared to be the policy of the United States to foster the development and encourage the maintenance of such a merchant marine.*

*Merchant Marine Act of 1936,  
Public Law 49-1985*

The U.S. Merchant Marine is in trouble. It lacks the infrastructure, the ships, and the personnel to perform the mission laid out for it in the Merchant Marine Act of 1936. National policies have largely ignored the importance of this vital asset, and now it is time to readdress the issue. We must do so, for if we do not we will find ourselves involved in a major war in which our deployed troops run out of the materiel they need to continue fighting and win.

### ***Testing the U.S. Merchant Marine: The War in the Persian Gulf***

*“In any major overseas military development sealift will deliver almost 95% of all dry cargo and 99% of all petroleum products.”<sup>1</sup>*

Before the collapse of the USSR, logistics planners focused on having equipment and materiel in Europe to support the continent’s defense before that materiel was actually needed. “The primary strategic logistics mission during the surge phase of any conflict before 1989,” write David Harris and Richard Stewart, “was the timely movement of personnel from US aerial ports of embarkation to link up with their equipment staged in the

theater of operations.” But times have changed. With the Cold War over, our national security strategy “rests primarily on projection of personnel *and* their equipment to a theater of operations. . . .and not to one theater of operations, but two.” [emphasis added]<sup>2</sup>

Since Admiral Crowe’s 1988 Posture Statement, quoted above, there has been only one such “military development:” the war in the Persian Gulf. And in that case, his figures turned out to be almost exactly correct.

In the Gulf War, overwhelming force propelled the coalition’s rapidly-achieved victory on the ground, and that force was carried to the fight aboard ships. “Desert Shield/Desert Storm involved one of the largest logistical operations in modern history,” writes Sean Connaughton. “By the time it was over, 3.8 million tons of cargo and 503,000 troops had been moved into theater. Of these totals, 95% of the cargo was moved by sea.”<sup>3</sup> Shipments of petroleum-based products, virtually none of which arrived by air, reached 5.4 billion tons.<sup>4</sup> About 500 ships were involved in the effort, including those of the Military Sealift Command (MSC), the Ready Reserve Force (RRF), and “U.S. and foreign commercial vessels under charter.”<sup>5</sup>

“One of the clearest lessons of the Gulf War is that the US cannot rely on airlift and {government-owned] fast sealift alone to support its mobility plans,” write Thomas Snyder and Stella Smith. “Even though the US staged the largest airlift of troops and equipment in history, it was still too slow.”<sup>6</sup> Commanding General Norman Schwarzkopf said after the war that it was a good thing U.S. forces were allowed six months to build up. No one knows whether the U.S. logistics system could have responded adequately without being given this time.<sup>7</sup>

Also of concern is the fact that of the 120 ships that were chartered, 101 were of foreign registry.<sup>8</sup> These figures point to a U.S. reliance on vessels of foreign registry during crisis. Non-U.S. vessels were used out of necessity; many RRF ships could not sail within the anticipated time frames either because of equipment problems or delays in acquiring trained and experienced crews. But it must be remembered that during the Gulf War the goals of the U.S.-led coalition were based on United Nations resolutions, were well supported by a great number of nations, and encountered very little direct opposition. This extremely high level of international cooperation will not always exist.

The 1936 Merchant Marine Act calls for the merchant marine to act as a “naval and military auxiliary in times of war or national emergency.” Certainly, the Gulf War was such an emergency, but if we infer from the wording of the Act that this naval auxiliary is tasked to carry the lion’s share of war materiel from the United States to the battle zone, then we must conclude that, during the Gulf War, the merchant marine fell grossly short of accomplishing its mission. For in fact, write Timothy Somes and his colleagues, “[t]he single largest source of sealift for the Gulf War was assets owned by the U.S. government.”<sup>9</sup> This assertion seems out of step with the idea that the merchant marine will serve as the primary naval auxiliary force.

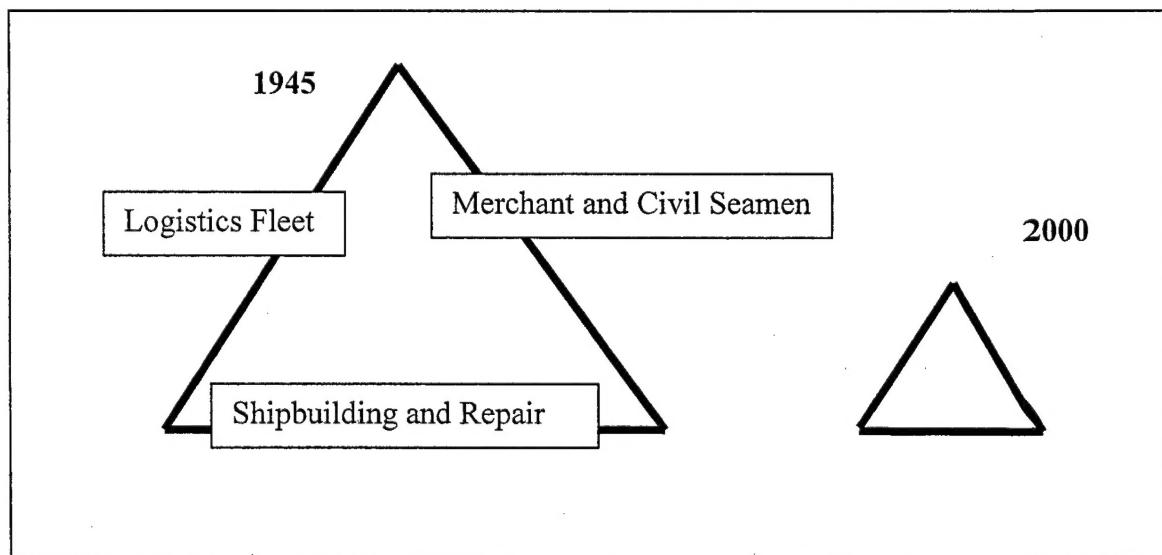
That brings us back to the gist of this discussion. Current emphasis on light and mobile forces, high-technology weapons, and information-based warfare does not change the fact that, in time of national crisis, the operational commander will still need force sustainment, which will come to the battle on ocean-going cargo ships. The first wave of those ships is rightly placed in direct government ownership, but the bulk of the materiel needed for sustainment must be moved on U.S. merchant ships. We have a lot of ships laid

up in port awaiting the next big war, but because they are not part of the active merchant fleet, many are in poor condition and lack crews. A ship that cannot get underway because of poor material condition or the lack of a licensed and experienced crew is just a warehouse.

We cannot count on fighting the next major U.S. war against a cooperative enemy, nor can we count on fighting it with virtually the whole world on our side. Our potential future adversaries have learned well the lessons taught by the Gulf War. And they will not repeat Saddam Hussein's mistakes. We must address and solve the merchant marine problem soon, or we will not be able to sustain the fight in a major war.

### *The Status of the Merchant Marine*

The U.S. flagged merchant fleet, the U.S. shipbuilding industry, and U.S. merchant seamen form the three sides of a very important triangle (see Figure 1). As with any triangle, if we weaken or remove one side, the other two soon collapse. Unfortunately, all three sides of this triangle have been in decline since World War II. This illustrates the very essence the merchant marine problem.



**Figure 1. The Merchant Marine Triangle and its post-WWII decline.**

While the merchant marine may be broken down into its components to facilitate discussion and analysis, it cannot carry out its mission unless its parts are brought together in a mutually supportive way and receive a reasonable amount of government support. Following is a detailed examination of each of the triangle's sides, a look at the policies, regulations, and economic realities affecting them, and finally a reintegration of the entire picture.

### *The U.S. Logistics fleet*

*When United States goes to war, it goes overseas—and 95% of all its military cargo goes by sea. It follows that U.S.-controlled cargo ships in adequate number and mix are vital to our national security interests. Additionally, it makes good sense to haul and control a fair amount of U.S. commerce in U.S. flag, civilian-owned and -operated merchant ships.<sup>10</sup>*

The U.S. military currently relies on a variety of government-controlled and commercial surge sealift vessels in time of crisis. The order in which these assets can be called into action is as follows:

- 1) Afloat Prepositioning Force (APF): fully operational, fully manned, fully loaded ships, deployed close to areas of potential conflict. These are Navy controlled in support of theatre CINCs.
- 2) Fast Sealift Ships (FSS): very large 30+-knot container/bulk ships held in reduced operating status, partially crewed and capable of sailing to a port of embarkation within four days. They are controlled by USTRANSCOM.
- 3) Charter shipping: the use of active commercial vessels if such vessels are available for contract. Contracting for their use is within the purview of MSC.
- 4) Ready Reserve Force (RRF): militarily useful ships held in a similar reduced operating status to the FSS, but with varying time windows for reaching full operational status (4-20 days). RRF activation requires SECDEF approval, and once activated these ships become part of MSC.
- 5) Sea Lift Readiness Program (SRP) and Voluntary Intermodal Service Agreement (VISA) shipping: ships whose owners agree to provide partial capacity to

emergent DoD needs on more or less regular runs. The Secretaries of Defense and Transportation must mutually approve their use.

- 6) National Defense Reserve Fleet (NDRF): very old and generally obsolescent and unseaworthy craft. Their activation could require months of rehabilitation and inspections.
- 7) Requisitioning: the involuntary call up of U.S.-flag vessels or vessels under effective U.S. control (EUSC).
- 8) NATO shipping: used only if NATO is involved in the crisis.<sup>11</sup>

(Use of the last three of these requires Presidential proclamation.)

As we have seen, Desert Shield/Desert Storm revealed a great number of shortfalls in using this system to meet our strategic sealift requirements. Difficulties encountered in the attempt to get the needed materiel to the Gulf revealed to high-level military planners that many improvements were needed. This realization was the impetus for the Joint Staff's Mobility Requirements Study (MRS), launched in the fall of 1990 to "determine future mobility requirements for the armed forces and develop an integrated mobility plan."<sup>12</sup> Published in 1992, the MRS determined that the first troops to deploy in a national emergency faced a considerable risk due to their lack of heavy armor and artillery. In 1995 the DoD's Mobility Requirements Study Bottom-Up Review Update reaffirmed these results.<sup>13</sup>

These two studies have given rise to real improvement in government-owned sealift, writes Richard Ackley, but at the same time, "the U.S. flag merchant marine continue[s] to decline in both number and militarily useful ships. The net effect [is] to offset part of the gains made by the sealift improvement program."<sup>14</sup> Of particular concern is military cargo incompatibility with civilian shipping. According to Connaughton, standardization of vessels, facilities, and containers are the commercial shipping industry's key to rapid and

efficient cargo movement and vessel turnaround. However, most military equipment cannot be containerized, and therefore cannot be moved on the majority of civilian/commercial vessels.<sup>15</sup> This means that a large number of commercial vessels theoretically available for DoD use are, in reality, of very limited usefulness to the military.

### *The U.S. Shipbuilding industry*

*“America is a major power—a superpower—only as long as it is a premier maritime power.”*<sup>16</sup>

A recent article in Seapower describes in detail the “disparity between shipbuilding-funding levels in the Navy’s real-world requirement for more ships.”<sup>17</sup> Though the emphasis of the article is on warships, the concept applies to government-owned sealift and commercial vessels as well. Put simply, the need for ships is greater, in both the public and private sectors, than the willingness to fund their construction.

Sen. Olympia J. Snowe (R-Maine), chair of the Senate Armed Services Committee’s Seapower Subcommittee, tied the navy’s shipbuilding dilemma to national policy: ““Ultimately, this goes back to the administration and other president’s decisions to place men and women in so many operations around the world. . . . The administration is not making an adequate request for funding to support those forces that are required to be deployed.””<sup>18</sup> Vice Admiral Conrad C. Lautenbacher, Jr., Deputy CNO for Resources, Warfare Requirements, and Assessments, while acknowledging funding constraints, summed up the situation this way: “We need to build a higher numbers of ships that we are today—there’s no doubt about it.”<sup>19</sup> It follows that this is equally true for the commercial sector. Connaughton, in summing up the situation, calls the United States a “hostile place to invest in shipping.”<sup>20</sup>

Informal discussions with U.S. naval officers who have worked with shipyards reveal another trend in U.S. shipbuilding. Because they are accustomed to the laxness of Navy contractual procedures and have learned that they get paid whether they produce a ship on time and within budget or not, U.S. shipyards have forgotten how to compete in the commercial sector. A recent “shipbuilding game” conducted by the Center for Naval Analyses seems to confirms this hypothesis.<sup>21</sup>

Christopher Clayton sums up the malaise of the U.S. shipbuilding industry this way: “In the 1990s, the health of the American shipbuilding industry is still tied to the forces of global politics and global economics,” he writes. “Unfortunately, from the U.S. shipbuilding industry’s standpoint, global economics and global politics have been weakening the U.S. industry rather than providing the shipyards with an environment conducive to a strong U.S. shipbuilding industry”<sup>22</sup>

#### ***U.S. Merchant Seamen***

*In a prolonged crisis, the pool of qualified mariners will likely be insufficient to both crew the commercial fleet and at the same time to sail all surge sealift assets.*<sup>23</sup>

Even a ship that is in good condition can't get underway without a trained crew, but the available pool of U.S. merchant seamen has been shrinking since World War II. Two old and but still active pieces of legislation, the 1884 Passenger Ship Act and the 1920 Jones Act, are considered critical in maintaining the rolls of U.S. mariners. Their function is to restrict waterborne trade between U.S. ports to domestic shippers only. Opponents of these acts claim they are barriers to free trade because they prohibit foreign carriers from operating between U.S. domestic ports. Supporters of the acts, however, claim the two acts provide economic benefits in shipbuilding and jobs, which would be at risk if the acts were

eliminated. While both arguments have their merit, one thing, Harris and Stewart point out, is sure: “The elimination of the Jones Act would mean a drastic reduction in the U.S. commercial fleet—to approximately 50 vessels—and the loss of 87% of shipboard billets.”<sup>24</sup> While this does not affect RRF and NDRF vessels directly, it does have a profound effect upon the manpower pool that would sail them (see Appendix A). A general rule is that for every two mariners working on a ship, one more is on leave, ready to be called up in time of crisis or serve in normal sea/shore rotation. Every ship that leaves the fleet, then, takes with it one-and-a-half jobs for very crewmen serving aboard at the time. The economic reality is simple; with such deep cuts in available jobs at sea, merchant mariners would be forced to leave their profession in droves. With a low national unemployment rate, most of these men and women would quickly find new jobs, jobs which likely would not support their continued licensure as merchant seamen. With no financial incentive to maintain their qualifications, most of these men and women would quickly lose their licenses. In a time of national emergency, they would be unavailable to crew the RRF.

There is yet another trend in the shipping industry that has the potential to further shrink the available pool of the mariners: the movement to enhance safety and environmental awareness at sea. A key player in both these efforts is the International Maritime Organization (IMO). This group, 153 nations strong, has recently (1995) spearheaded the ratification of two new safety conventions, and the United States is a signatory to both. The first of these conventions establishes amendments to the 1978 Standards of Training, Certification, and Watchkeeping for Seafarers (STCW). The second prescribes the International Safety Management (ISM) code. The essence of these two new conventions is that they will change the definition of a “qualified” mariner, requiring many seaman who

have been licensed for many years to get additional training or become unqualified. It is not clear who will fund this additional training, and it is reasonable to deduce that many currently licensed but inactive merchant seamen will elect not to upgrade their licenses.<sup>25</sup> In that case, they too will be lost as potential crewmembers for the RRF.

On a somewhat positive note, October 1996 saw the passage of the Maritime Security Act (MSA), which guarantees U.S. merchant mariners the same reemployment rights enjoyed by members of armed forces reservists should they be called to action in time of war or national emergency. But the MSA has limitations. It cannot be enforced on behalf of U.S. mariners called up from vessels operating under the flags of other nations. If the U.S. fleet is allowed to continue to shrink, many U.S. mariners who wish to remain in their profession will be forced to work on foreign-flagged vessels. "We can only speculate about the number of men and women who might be inclined to leave foreign flag ships that are not bound by the Maritime Security Act to sail surge sealift assets," note Harris and Stewart, "if they are not certain of re-employment by their shipping companies at the conclusion of the crisis."<sup>26</sup>

Another group of seafarers who figure into this problem are those in the direct employ of the U.S. government. According to Vice Admiral G. S. Holder, commander of MSC, more than 5,000 mariners are currently employed by MSC, 60% of those being the Civil Service Mariners (CIVMARs) who crew the Naval Fleet Auxiliary Force, full-time logistics ship which support day-to-day naval operations. The remaining 40% are commercial contract mariners serving aboard all other vessels "operated for MSC under contract."<sup>27</sup> VADM Holder emphasizes the importance of CIVMARs to the overall mission of the Military Sealift Command, but admits that, for many of the same reasons that effect

non-government mariners, there are difficulties in recruiting and retaining qualified personnel in these roles.<sup>28</sup>

In short, it looks increasingly bad for the men and women who make up the personnel side of the merchant marine triangle. “In normal times, the livelihood of US merchant mariners is dependent upon the existence of a US flag merchant fleet,” say Harris and Stewart. “Currently, however, that fleet continues its recent downward spiral and can no longer be counted on to provide the required numbers of qualified personnel necessary to prove all surge sealift assets during a period of crisis.”<sup>29</sup>

### ***Policy, Regulation, and Economic Realities***

*U.S. flag ships fulfill important function than support of our economy and security; and therefore, the national interest. It is through foreign trading that the nation maintains its industrial posture; and through shipping, the industrial power of the U.S. is sustained.*<sup>30</sup>

The consistent trend that emerges when we examine the problems of the U.S. Merchant Marine is that there has not been a coordinated government effort to partner with industry in ensuring the provisions of the Merchant Marine Act are met. According to P. L. Campbell, “[t]he lack of coordination of federal transportation policy throughout our history, coupled with a the lack of long-range planning and goal-setting, seems to provide a framework for the Merchant Marine demise.”<sup>31</sup> Campbell adds that the merchant marine suffers from having to work under the restriction of a “decentralized administrative and legislative structure with 32 federal agencies and 12 major congressional committees” that share responsibility for the Merchant Marine.<sup>32</sup>

The shipping and shipbuilding industries are perhaps equally guilty. High labor costs and oppressive regulation have escalated the cost of building commercial ships in the United States and have driven U.S. import and export cargo traffic onto foreign flagged vessels.<sup>33</sup>

Every shipment arriving and departing U.S. shores on a non-U.S.-flagged vessel represents lost revenues for an American shipper and lost wages for American merchant seamen. The trend toward this is real. "U.S. shipyards are not able to meet the prices offered by overseas competition, writes James L. McClane, "and American ship owners cannot pay U.S. ship prices or U.S. crew wages and still offer competitive freight rates on the world market."<sup>34</sup>

One policy advantage U.S. shippers have long enjoyed is embodied in cargo preferences laws, which essentially provide that a high proportion of certain categories of cargo—chief among them defense-related cargo—must be carried by domestic carriers. Though cargo preferences for U.S.-flagged shipping represent, in a sense, a barrier to free trade, they also represent a much-needed advantage to U.S. shippers who must otherwise compete with foreign-flagged shipping. Foreign shipping enjoys a great number of economic and regulatory advantages over U.S. shipping, and without the cargo preferences, the U.S. shipping industry would quickly collapse.<sup>35</sup>

As previously stated, during Desert Shield/Desert Storm, the U.S. was able to engage the services of a great number of foreign-flagged vessels. While this worked for an operation supported by a huge coalition of nations, using foreign-flagged vessels and foreign crews is risky. The ships' owners or crews can refuse to enter a contested port or hostile zone. If they so choose, there is little the U.S. government can do about it. "It would be nice to use only U.S. ships and seafarers in an emergency," Connaughton writes, "but the reality is that both are in short supply, even in the best of times."<sup>36</sup> He further notes that DoD rightly shies away from using foreign shipping during peacetime for security reasons, but, paradoxically, must use it when a crisis breaks out.<sup>37</sup>

Related to the issue of foreign-controlled shipping is the growing use by American shippers of “flags of convenience,” which has overrun U.S.-flagged shipping. “Flags of convenience have been a way of life in the maritime community. They thrive because ship owners are constantly seeking ways to cut operating costs and improve profits,” notes Dorothy Lou Tate. “When money is a motivator little can be done to hinder their use.”<sup>38</sup>

Increasing reliance on foreign-controlled shipping is a dangerous trend, both for DoD and for the American economy as a whole. In the words of P. L. Campbell, “[t]o be held hostage economically for the lack of U.S. shipping foretells a dismal future.”<sup>39</sup> It is a trend that must not be allowed to continue, for there may come a time when we have to rely solely on U.S. assets. This was implied by President Bill Clinton: “America must be willing [and therefore must be able] to act alone when our interests demand it …Otherwise we will be left with a choice in future crises between doing everything ourselves or doing nothing at all.”<sup>40</sup>

#### *Significance for the Operational Commander*

*To the militarily educated it goes without saying that the most perfectly conceived operational plan is liable to fail if its logistic support is not equally well thought out and implemented.*<sup>41</sup>

*Reductions in the number of U.S. forces forward deployed have made lift—in particular, sealift—the pivotal component of U.S. military power. Today, however, there is insufficient to military sealift available to meet every anticipated contingency.*<sup>42</sup>

The United States National Security Strategy (NSS) and National Military Strategy (NMS) provide the basis for operational plans. The NSS recognizes and expresses the need for strategic lift: “Strategic mobility is a key element of our strategy. . . . Deployment and sustainment of U.S. and multinational forces requires maintaining and ensuring access to sufficient fleets of aircraft, ships, vehicles and trains, as well as bases, ports, pre-positioned equipment and other infrastructure.”<sup>43</sup> The NMS provides similar emphasis. It lists four

strategic concepts that “govern the use of our forces to meet the demands of the strategic environment.”<sup>44</sup> The first of these is strategic agility, defined as “the timely concentration, employment and sustainment of U.S. military power anywhere, at our own initiative, and *at a speed and tempo that our adversaries cannot match* [emphasis added].”<sup>45</sup>

Strategic lift is the means by which this strategic agility is created and maintained. In a military action occurring on some foreign shore, U.S. forces and equipment will have to be transported, while the forces and equipment of our adversary will be in place. This makes the above goal of providing such force at an unmatched speed and tempo problematic. The 1990-91 Gulf War demonstrated this concept. U.S. strategic agility was no match for that of the Iraqis, who had the advantage of operating close to home. Unless U.S. shores are invaded—a scenario we surely hope to avoid—our future adversaries will have the same home turf advantage. Therefore, we must improve our ability to move forces and equipment to where the trouble is. The NMS recognizes this:

Robust strategic sealift, air mobility, and ground transportation combined with prepositioned supplies and equipment ashore and afloat, are critical to maintaining strategic agility. . . . Keeping pace with evolving technology in the transportation industry guarantees are mobility forces continued global reach. Strategic mobility enhancements like increased airlift capability, additional prepositioning of heavy equipment afloat and ashore, increased sealift surge capacity, and additional material handling equipment (MHE) will ensure strategic agility and facilitate our ability to protect our national interests and assist our allies when needed.<sup>46</sup>

Every operational plan is inextricably linked to a movement plan of some kind, but that movement plan is null and void without adequate strategic lift. Of course, strategic lift comes at a price, and it competes with other military procurement programs for every dollar. The United States is procuring military hardware and reorganizing military structures expressly to make them more mobile, at the same time trading off its ability to carry out the

NSS/NMS. Operational commanders are being asked to do more with less. We would be better off maintaining the heavy structure we currently have and increasing the proportion of the military budget allocated to strategic lift, while at the same time helping commercial shipping to reassert itself on the world scene. That will get us closer to meeting the goals of the NSS/NMS and winning the next war than lightening the force ever can.

Put simply, we still need heavy forces, as demonstrated in the 1990-91 Gulf War. As in any military operation, the commanders of coalition forces had to weigh their options against four major operational planning factors:

- 1) What is the desired military/political/social end state?
- 2) What courses of action can result in that end state's being achieved?
- 3) Do we have the resources to carry out these proposed courses of action?
- 4) What risks and costs are associated with these courses of action?<sup>47</sup>

To be able to confidently recommend a course of action (COA) to the National Command Authority, the commander needs to *know* as much as possible and keep assumptions to a minimum. Of particular criticality for this discussion is the third point. Knowing beyond reasonable doubt that available strategic lift can carry out the deployment and sustainment of his forces for a given COA is a critical factor, one that must not lie on the assumptions side of the equation.

#### ***Putting the Picture Together Again***

*The continuing decline of the US-flag merchant fleet, changes in ocean-going billets available to US merchant seamen, and new international training and certification requirements for all merchant seamen, regardless of nationality, play their parts individually and collectively in eroding the assumptions on which current US surge sealift plans rest. Unless steps are taken to modify current US practices, the cumulative effects of these changes could emerge as shortages of surge sealift personnel needed to carry out any national security strategy.<sup>48</sup>*

Since the 1992 Mobility Requirements Study, the United States has taken some positive steps to improve the status of its merchant marine. One of these is the 1996 Maritime Security Act, which provides a subsidy for U.S. ships. The subsidy is designed to offset the higher cost of operating, flagging, and crewing a purely U.S. vessel. The act has some drawbacks, however:

First, the new subsidies provided almost \$1 million less per vessel, per year, than allowed in the previous operating differential subsidies contracts. Second, there are 12 fewer ships authorized in this program, 47 compared to 59 in the old program. Finally, congress authorized spending up to \$100 million a year on the ships for 10 years. The funds, of course, must be appropriated each year; there's no guarantee that all or any substantial portion of the authorized some will actually be spent as intended in the act.<sup>49</sup>

Since this is a non-defense program, reauthorization of the subsidies competes annually with entitlements and other such spending. Connaughton adds that because of this, the Maritime Security Program may sustain a limited U.S. sea lift capacity, but it certainly will not expand it.<sup>50</sup> It could easily be toppled from the budget by any number of competing programs.

McClane notes a disconnect between the current inventory of logistics vessels and the original intent of the 1936 merchant marine act. He says that the vessels are categorized based on who controls them, but that none of these categories is entitled "merchant marine." Nor are the ships as a group called the "merchant marine. "We attempted to create via legislation that [a "merchant marine"] which did not naturally exist as an American institution."<sup>51</sup> That is because the merchant marine is not just ships, but infrastructure and people as well. In creating a fleet of logistics vessels which have little to do with routine commerce, we have unintentionally drawn lines between physical sealift assets and the men and women who crew them, and between the merchant marine and the military. We must erase those lines and link the elements in the way the Act originally intended.

Such efforts are being made. Connaughton suggests that “the military needs to be more familiar with existing commercial transportation infrastructure and equipment and anticipate using such assets.”<sup>52</sup> Albert Melvin agrees, arguing for DoD to concentrate on making its materiel transportable via standard shipping containers, thus drastically increasing the number of militarily useful commercial vessels. He describes in detail the time savings that could be realized by containerizing DoD materiel and moving it on commercial container ships.<sup>53</sup> While his argument is well made, one wonders whether there is really time to be saved. He argues, for example, that many military vehicles can be containerized. But anyone who has ever shipped vehicles in this manner understands that it is much slower than the use of roll-on/roll-off (RO-RO) shipping. Furthermore, it is doubtful that DoD would be willing to procure warfighting equipment only if it can be made to fit into standard shipping containers.

The answer lies neither in making military equipment fit into commercial shipping containers nor in forcing commercial shippers to convert their container ships to the more militarily useful breakbulk. Rather, it lies somewhere in the middle. We need to create the right balance of breakbulk and RO-RO for military use and container space for commercial use *in the same vessel*, or in modularized vessels that can quickly be converted from one use to the other. To that end, future plans ought to include a system for rapid conversion of commercial vessels into at least marginal military usefulness.

Such a plan is under consideration. Known in the industry as “Build and Charter,” the idea, writes Clayton, is to have either the government or a commercial concern finance and contract for the building of “[s]hips of mutually useful design...[that] can foster closer relationships between ship owners, shipbuilders, and the Department Of Defense.”<sup>54</sup>

Whichever entity not financing the ship would then be obliged to charter it for a proportion of its useful life, thus sharing its cost. "Modern ships capable of meeting the DOD and commercial requirements," Clayton adds, "make a build and charter program a worthwhile goal to pursue."<sup>55</sup>

Another positive development is increased shipboard prepositioning of equipment and supplies. This eases the initial surge sealift requirement, but U.S. logistics planners must be careful not to develop an over reliance on it. "There is a point where enough is reached," asserts Kampsen, "and every ship tied up with the prepositioning missions detracts from the total capacity of surge sealift."<sup>56</sup> Again, the answer is to achieve balance between preloaded ships possibly anchored in the wrong place and very fast ships that can be quickly loaded and sent to the hot spot. Kampsen writes: "The Army may instead [of more prepositioning] attempt to focus efforts toward improving the speed and responsiveness of strategic sealift. . . . [to] provide a worldwide force projection improvement for United States-based army forces."<sup>57</sup>

A U.S. commercial shipping concern, FastShip Atlantic, already has plans for a large, 40-plus-knot cargo ship on the table.<sup>58</sup> The design for these ships could be adapted for military use, or the ships could be co-designed for usefulness to both DoD and the shipping industry. Having a fleet of logistics ships capable of transiting the Atlantic in five days or less in any sea state would be a tremendous boon to the operational commander. The question, "can this COA be accomplished with available assets?" would take on a completely new dimension.

If such ships are built, they must be financed by American banks, owned and operated by American companies, crewed by American merchant seaman, and sailed under the U.S.

flag. That will ensure their rapid availability in time of national security emergency without violating any existing laws or policies. They will presumably need a large crew, and that will keep more merchant seamen in full-time employment. All by itself, such ships could go a long way toward revitalizing the U.S. Merchant Marine.

### *Conclusions*

The United States must maintain the heavy military force it needs to carry out its NSS and NMS, and it must develop the strategic lift required to get that heavy force to the fight. If winning wars is to remain the bottom line of our security and military strategies, we had better have the strategic lift to get the forces to the fight. In the event of a major, long-term conflict or other military operation, the theater commander will need vast amounts of materiel to provide sustainment to his or her forces. Airlift is fast, and it suffices in the very short term, but it is grossly inefficient at carrying heavy warfighting assets, and over the long haul it must give way to cargo ships moving over the ocean's surface. Only they can efficiently provide long-term sustainment and logistics support.

The 1936 Merchant Marine Act calls for the bulk of this sustainment mission to be carried out by civilian shipping, but subsequent policies and regulations—and the economic realities of free trade—have sent the U.S. civilian merchant fleet into a steady decline. We must keep on the books those regulations which support U.S. shipping. We must revitalize our shipbuilding industry and our merchant fleet, and thus ensure the continued viability of our merchant mariner force. We cannot tell when the next big war will breakout; therefore, it is vital that we address these problems now.

## Notes

<sup>1</sup> Robert A. Miles, Jr., "The Sealift Dilemma . . . Is Not the Decline But the Inability to Change," (Unpublished Research Paper, U.S Army War College, Carlisle Barracks, PA: 1990), 4.

<sup>2</sup> David G. Harris and Richard D. Stewart, "US Surge Sealift Capabilities: A Question of Sufficiency," Parameters 28, no. 1 (1998): 67, 67-83.

<sup>3</sup> Sean T. Connaughton, "Reinventing Sealift," U.S. Naval Institute Proceedings 123, no. 12 (1997): 59, 59-61.

<sup>4</sup> Christopher Allen Clayton, "The Impact of Declining Navy Budgets on United States Shipyards," (Unpublished Thesis, Naval Postgraduate School, Monterrey, CA: 1992), 75-76.

<sup>5</sup> Connaughton, 59.

<sup>6</sup> Thomas J. Snyder, and Stella T. Smith, "The War in the Persian Gulf," Air Force Journal of Logistics XXII, no. 2 (1998): 22, 16-28.

<sup>7</sup> Ibid.

<sup>8</sup> Clayton, 76.

<sup>9</sup> Timothy E. Somes, William K. Fogerty, and Thomas J. Gregory, "Manning Sealift's Ready Reserve," U.S. Naval Institute Proceedings 121, no. 1 (1995): 46, 46-52.

<sup>10</sup> Richard T. Ackley, "Sealift and National Security," U.S. Naval Institute Proceedings, July 1992, 41.

<sup>11</sup> U.S. Naval War College, Joint Military Operations Department, "Strategic Mobility and Sealift in Support of Maritime Operations." (Unpublished Instructional Material. Newport, RI: Spring 2000) 10-11.

<sup>12</sup> Michael E. Kampsen, "Army and Marine Corps Afloat Prepositioning: Providing Full Spectrum Capability Through Complementary Programs," (Unpublished Research Paper, U.S Army War College, Carlisle Barracks, PA: 1998), 5.

<sup>13</sup> Ibid., 5-6.

<sup>14</sup> Ackley, 42.

<sup>15</sup> Connaughton, 61.

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<sup>16</sup> Representative Herbert Bateman (R-Virginia), quoted in Richard F. Burns, "American Sea Power in the 21st Century," Sea Technology, January 2000, 54.

<sup>17</sup> Senator Olympia J. Snowe (R-Maine), quoted in Gordon I. Peterson, "Navy Shipbuilding Plan Falls Short: Critics Voice 'Concern and Frustration,'" Sea Power, April 2000, 29.

<sup>18</sup> Snowe, quoted in Peterson, 30.

<sup>19</sup> Quoted in Peterson, 29.

<sup>20</sup> Connaughton, 61.

<sup>21</sup> Andrew Dallas, and others, The Shipbuilding Game: A Summary Report, CRM 94-84 (Alexandria, VA: Center for Naval Analyses, 1994). 5-11.

<sup>22</sup> Clayton, 19-21.

<sup>23</sup> Harris and Stewart, 71,

<sup>24</sup> Ibid., 72.

<sup>25</sup> Ibid., 74-75.

<sup>26</sup> Ibid., 73.

<sup>27</sup> G. S. Holder, "Retention and Recruitment: Keys to the MSC Mission," Sealift, March 2000, 3.

<sup>28</sup> Ibid.

<sup>29</sup> Harris and Stewart, 69.

<sup>30</sup> P. L. Campbell, "U.S. Liner Fleet and the Economy," (Unpublished Research Paper, U.S. National Defense University, Washington, DC: 1993), 2.

<sup>31</sup> Ibid., 17.

<sup>32</sup> Ibid.

<sup>33</sup> Snyder and Smith, 19-20. The authors blame the high cost of U.S. merchant seaman labor on labor unions.

<sup>34</sup> James L. McClane, "Achieving Adequate United States Maritime Capital in an Era of Declining Resources," (Unpublished Research Paper, U.S. National Defense University, Washington: 1992.), 5.

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<sup>35</sup> Campbell, 4-6.

<sup>36</sup> Connaughton, 61.

<sup>37</sup> Ibid.

<sup>38</sup> Dorothy Lou Tate, "Flags of Convenience and Their Effect on NATO Merchant Marine Manning," (Unpublished Thesis, Naval Postgraduate School, Monterrey, CA: 1987), 18.

<sup>39</sup> Campbell, 28-29.

<sup>40</sup> White House, A National Security Strategy for a New Century, (Washington: 1999), iv.

<sup>41</sup> Kenneth Macksey, For the Want of a Nail: The Impact on War of Logistics and Communications (London: Brassey's, 1989), xiii.

<sup>42</sup> Connaughton, 59.

<sup>43</sup> White House, 11.

<sup>44</sup> Department of Defense, National Military Strategy of the United States of America (Washington: 1997), 3.

<sup>45</sup> Ibid.

<sup>46</sup> Ibid., 29.

<sup>47</sup> Naval War College, Joint Military Operations Department, Syllabus, (Unpublished Instructional Material, Newport, RI: Spring 2000), 3-4.

<sup>48</sup> Harris and Stewart, 68.

<sup>49</sup> Ibid., 70.

<sup>50</sup> Connaughton, 60.

<sup>51</sup> McClane, 12-13.

<sup>52</sup> Connaughton, 61.

<sup>53</sup> Albert A. Melvin, "The U.S. Flag Merchant Marine's Containership Fleet: The Key to U.S. Strategic Sealift," Defense Transportation Journal 52, no. 2 (1996), 15-16, 10-16.

<sup>54</sup> Clayton, 77-78.

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<sup>55</sup> Ibid.

<sup>56</sup> Kampsen, 23.

<sup>57</sup> Ibid.

<sup>58</sup> FastShip Atlantic, Inc., “New Technology that is Bridging the Gap Between Air Freight and Ocean Freight,” <http://www.fastshipatlantic.com/html/introduction.htm> (20 April 2000).

## Appendix A

### The Merchant Marine “Establishment”

“Establishment” is the international term for number of individuals required to crew a vessel or fleet of vessels. In the U.S. that is three crews for two ships, or a ratio of 1.5 mariners for each billet. The total number of mariners (1998) is about 11,000. MarAd says it would take about 2,650 mariners to fully crew the RRF (not counting those already onboard). This number is for the initial phase of any crisis and does not consider the extra 50% for the 1.5 ratio. That factor pushes the total needed for a long-term activation of the RRF to almost 4,000. Two-thirds of the active pool of 11,000 mariners are actively working at any given time, leaving fewer than 3,700 on leave. That leaves the RRF eight percent undermanned for a long-term crisis.

But it is actually even worse than that. Over time, an average of one of every six active mariners is already part of an RRF ship’s lay-up crew. This means that 9,200 rather than 11,000 is the real number of mariners representing the starting figure. Doing the math once again, we find that leaves only about 3,100 mariners on leave who can immediately fill RRF ships. So, the real shortfall in fully manning the RRF is about 23%.

Source: David G. Harris, and Richard D. Stewart, “US Surge Sealift Capabilities: A Question of Sufficiency,” Parameters 28, no. 1 (1998), 71.

## Bibliography

Ackley, Richard T. "Sealift and National Security." U.S. Naval Institute Proceedings, July 1992, 41-47.

Angevine, John R. "The Revolution in Military Logistics: Surviving the Budget Process." Unpublished Research Paper, U.S Army War College, Carlisle Barracks, PA: 1999.

Brown, Kenneth N. Strategics: The Logistics-Strategy Link. Washington: National Defense University Press, 1987.

Campbell, P. L. "U.S. Liner Fleet and the Economy." Unpublished Research Paper, U.S National Defense University, Washington, DC: 1993.

Cebrowski, Arthur K. "President's Forum." Naval War College Review, Winter 2000, 3-5.

Chilcoat, Robert A. and David S. Henderson. "Army Prepositioning Afloat." Joint Force Quarterly, Spring 1994, 51-57.

Clayton, Christopher Allen. "The Impact of Declining Navy Budgets on United States Shipyards." Unpublished Thesis, Naval Postgraduate School, Monterrey, CA: 1992.

Cohen, William S. "Annual Report to the President and the Congress." Department of Defense, Washington: 1999.

Connaughton, Sean T. "Reinventing Sealift." U.S. Naval Institute Proceedings 123, no. 12 (1997): 59-61.

Cook, Kevin S. "Meeting the Strategic Sealift Needs of the U.S. with a Limited Merchant Marine." Unpublished Research Paper, U.S Army War College, Carlisle Barracks, PA: 1999.

Dallas, Andrew, and others. The Shipbuilding Game: A Summary Report. CRM 94-84. Alexandria, VA: Center for Naval Analyses, 1994.

DeGeus, Stan, with updates by Joint Military Operations Department. "Joint Military Operations Reference Guide." Unpublished Instructional Material, U.S. Naval War College, Newport, RI: September 1999.

Dowd, Kenneth S. "Logistics: JV 2010, Focused Logistics." Unpublished Research Paper, U.S Army War College, Carlisle Barracks, PA: 1998.

FastShip Atlantic, Inc. "New Technology that is Bridging the Gap Between Air Freight and Ocean Freight." <<http://www.fastshipatlantic.com/html/introduction.htm>> (20 April 2000).

Hall, Russell S. "United States Merchant Marine: Past, Present and Future." Military Logistics 23, no. 4 (1989): 17-22.

Harris, David G., and Richard D. Stewart. "US Surge Sealift Capabilities: A Question of Sufficiency." Parameters 28, no. 1 (1998): 67-83.

Holder, G. S. "Retention and Recruitment: Keys to the MSC Mission." Sealift, March 2000, 3.

Kampsen, Michael E. "Army and Marine Corps Afloat Prepositioning: Providing Full Spectrum Capability Through Complementary Programs." Unpublished Research Paper, U.S Army War College, Carlisle Barracks, PA: 1998.

Kelly, Edward V. "A New Framework for the U.S-Flag Fleet." Sea Power 40, no. 5 (1997): 51-54.

Kesteloot, Robert K. "El Nino, Y2K, and Other Cyclical Phenomena." The Navy League of the United States Almanac of Seapower, 1999, 42, no. 1 (1999): 27-34.

\_\_\_\_\_. "Mares' Tails and a Rising Glass: A Harbinger of Fair Weather for the Merchant Marine." Sea Power 40, no. 1 (1997): 67-73.

\_\_\_\_\_. "Strategic Sealift Faces its Third Challenge." Sea Power 40, no. 5 (1997): 47-50.

Macksey, Kenneth. For the Want of a Nail: The Impact on War of Logistics and Communications. London: Brassey's, 1989.

McCaffree, Burnham C., and John F. Ince. Transitioning the Combat Logistics Force into the 21st Century. Alexandria, VA: Center for Naval Analyses, 1998.

McClane, James L. "Achieving Adequate United States Maritime Capital in an Era of Declining Resources." Unpublished Research Paper, U.S. National Defense University, Washington: 1992.

Melvin, Albert A. "The U.S. Flag Merchant Marine's Containership Fleet: The Key to U.S. Strategic Sealift." Defense Transportation Journal 52, no. 2 (1996), 10-16.

Miles, Robert A. Jr. "The Sealift Dilemma . . . Is Not the Decline But the Inability to Change." Unpublished Research Paper, U.S Army War College, Carlisle Barracks, PA: 1990.

National Advisory Committee on Oceans and Atmosphere. "Marine Transportation in the United States: Constraints and Opportunities." Washington: U.S. GPO, 1983.

Navy League of the United States. The Almanac of Seapower, 1999, 42, no. 1 (1999).

Peterson, Gordon I. "Navy Shipbuilding Plan Falls Short: Critics Voice 'Concern and Frustration.'" Sea Power, April 2000, 29-30.

Phillips-Birt, D. The Future of Ships. Saint Ives, UK: Imray, 1970.

Rhodes, J. E., and G. S. Holder. "Seabased Logistics: A 21st Century Warfighting Concept." Unpublished White Paper, Naval Doctrine Command, Marine Corps Combat Development Command, Washington, 1998.

Snyder, Thomas J. and Stella T. Smith. "The War in the Persian Gulf." Air Force Journal of Logistics XXII, no. 2 (1998): 16-28.

Somes, Timothy E., William K. Fogerty, and Thomas J. Gregory. "Manning Sealift's Ready Reserve." U.S. Naval Institute Proceedings 121, no. 1 (1995): 46-52.

Tate, Dorothy Lou. "Flags of Convenience and Their Effect on NATO Merchant Marine Manning." Unpublished Thesis, Naval Postgraduate School, Monterey, CA: 1987.

U.S. Chief of Naval Operations. Deputy Chief of Naval Operations for Plans, Policy, and Operations. Evaluation of Revolution in Military Affairs Activities. Report to the Assistant Secretary of Defense for Strategy and Requirements. Washington: 1997.

U.S. Chief of Naval Operations. Naval Warfare (Naval Doctrine Publication 1) Washington: March 28, 1994.

U.S. Congress. House. Committee on Merchant Marine and Fisheries. H.R. 5627: A Bill to Amend the Merchant Marine Act, 1936, as Amended, To Establish a Contingency Retainer Program and Improve the United States-Flag Merchant Marine. Hearings before the Subcommittee on Merchant 102nd Cong, 2nd sess, 8, 23, and 24 July 1992.

U.S. Department of Defense. *See* Cohen, William S.

\_\_\_\_\_. National Military Strategy of the United States of America. Washington: U.S. GPO, 1997.

U.S. Department of Transportation. Maritime Administration. MARAD '98: 1998 Annual Report. Washington: U.S. GPO, 1999.

U.S. General Accounting Office. Commercial Maritime Industry: Updated Information on Federal Assessments. Report to the Chairman, and Ranking Democratic Member, Committee on Transportation and Infrastructure, House of Representatives. Washington: 1999.

\_\_\_\_\_. Maritime Industry: Cargo Preference Laws--Estimated Costs and Effects. Report to Congressional Requesters. Washington: 1994.

\_\_\_\_\_. Maritime Security Fleet: Factors to Consider Before Deciding to Select Participants Competitively. Report to Congressional Requesters. Washington: 1997.

\_\_\_\_\_. Ready Reserve Force: Ship Readiness Has Improved, but Other Concerns Remain. Report to the Chairman, Subcommittee on Readiness, Committee on Armed Services, House of Representatives. Washington: 1994.

U.S. Joint Chiefs of Staff. Doctrine for Logistic Support of Joint Operations (Joint Pub 4-0) Washington: January 27, 1995.

\_\_\_\_\_. Joint Doctrine for the Defense Transportation System (Joint Pub 4-01) Washington: June 17, 1997.

U.S. Naval War College. Joint Military Operations Department. "Strategic Mobility and Sealift in Support of Maritime Operations." Unpublished Instructional Material. Newport, RI: Spring 2000.

\_\_\_\_\_. Joint Military Operations Department. Syllabus. Unpublished Instructional Material. Newport, RI: Spring 2000.

U.S. Transportation Command. "Understanding the Defense Transportation System." USTRANSCOM Handbook 24-2. Washington: U.S. GPO, 1998, 1-20.

U.S. White House. A National Security Strategy for a New Century. Washington: U.S. GPO, 1999.